

CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. A slit valve hub connector comprising a hub connector and a slit valve, wherein the hub connector is capable of being attached to a catheter tube and the slit valve seals the catheter tube except when being accessed by an introducer to prevent blood loss or air embolism.
2. The slit valve hub connector of claim 1, wherein the hub connector is capable of being attached to a standard luer fitting.
3. The slit valve hub connector of claim 1, wherein the hub connector is capable of operating as a tunneler connector.
4. The slit valve hub connector of claim 1, wherein the hub connector is capable of providing passage for the introducer through the slit valve.
5. The slit valve hub connector of claim 1, wherein the slit valve is built-in as an integral part of the hub connector.
6. The slit valve hub connector of claim 1, wherein the hub connector is made of a material having a hardness in the range of 90 Shore A to 90 Shore D, while the slit valve is made of a material having a hardness in the range of 40 to 60 Shore A.
7. The slit valve hub connector of claim 1, wherein the hub connector is made of a material having a hardness in the range of 70 to 80 Shore A while the slit valve is made of a material having a hardness in the range of 40 to 60 Shore A.
8. The slit valve hub connector of claim 1, wherein the hub connector and slit valve materials are substantially the same.

9. The slit valve hub connector of claim 5, wherein a slit is made at a necked portion of the hub connector molded without the slit.

10. The slit valve hub connector of claim 1, wherein the introducer is a syringe or a guidewire.

11. A catheter valve hub connector comprising a hub connector and a catheter tube having a slit valve built-in as an integral part of the catheter tube, wherein the slit valve seals the catheter tube except when being accessed by an introducer to prevent blood loss or air embolism.

12. The catheter valve hub connector of claim 11, wherein the hub connector is capable of being attached to a standard luer fitting.

13. The catheter valve hub connector of claim 11, wherein the hub connector is capable of operating as a tunnel connector.

14. The catheter valve hub connector of claim 11, wherein the hub connector is capable of providing passage for the introducer through the slit valve.

15. The catheter valve hub connector of claim 11, wherein the hub connector is overmolded over the slit valve.

16. The catheter valve hub connector of claim 11, wherein the hub connector is made of a material having a hardness in the range of approximately 80 Shore A to 70 Shore D, while the slit valve is made of a material having a hardness in the range of approximately 40 to 60 Shore A.

17. The catheter valve hub connector of claim 11, wherein the hub connector is made of a material having a hardness in the range of approximately 60 to 90 Shore A, while the slit valve is made of a material having a hardness in the range of approximately 40 to 60 Shore A.

18. The catheter valve hub connector of claim 11, wherein the hub connector and slit valve materials are substantially the same.

19. The catheter valve hub connector of claim 11, wherein the slit valve is within a necked portion that is preformed in the catheter tube.

20. The catheter valve hub connector of claim 11, wherein the introducer is a syringe or a guidewire.

21. A valve tubing hub connector comprising a hub connector and a tubing having a slit valve built-in the tubing, wherein the hub connector is capable of being attached to a catheter tube and the slit valve seals the catheter tube except when being accessed by an introducer to prevent blood loss or air embolism.

22. The valve tubing hub connector of claim 21, wherein the hub connector is capable of being attached to a standard luer fitting.

23. The valve tubing hub connector of claim 21, wherein the hub connector is capable of operating as a tunneler connector.

24. The valve tubing hub connector of claim 21, wherein the hub connector is capable of providing passage for the introducer through the slit valve.

25. The valve tubing hub connector of claim 21, wherein the hub connector is overmolded over the slit valve.

26. The valve tubing hub connector of claim 21, wherein the hub connector is made of a material having a hardness in the range of approximately 60 to 90 Shore A, while the valve slit is made of a material having a hardness in the range of approximately 40 to 60 Shore A.

27. The valve tubing hub connector of claim 21, wherein the hub connector and slit valve materials are substantially the same.

28. The valve tubing hub connector of claim 21, wherein the slit valve is within a necked portion that is preformed in the catheter tube.

29. The valve tubing hub connector 21, wherein the introducer is a syringe or a guidewire.